

FLUORIDE  
ACTION  
NETWORK  
PESTICIDE  
PROJECT

Pesticide Directory :  
A-E | E | G-P | Q-Z

FAN's Pesticide  
Project

Adverse Health  
Effects

Glossary of terms

Useful Links

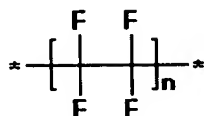
Contact Project

Search Pesticide  
Database:

Search

ACTIVITY: US EPA List 3 Inert (Component used in plastic slow release tag)

Structure:



Inc  
Advers  
NTIS

From Toxline at Toxnet

Document Number: NIOSH/00080478

Trudy Leningradskogo Sanitarно-gigienicheskogo  
Meditsinskogo Instituta, Vol. 44, pages 164-176,  
1958

### Toxicity of Tetrafluoroethylene

Zhemerdi A

The toxic properties of the tetrafluoroethylene (9002-84-0) monomer and of products of the thermal treatment of the tetrafluoroethylene polymer in acute experiments on cats, rabbits, albino rats and albino mice are reported. In rats and rabbits the inhalation of monomer induced hyperemia of organs, especially the brain, hemorrhage in the spleen and lungs, and dystrophic changes in the kidneys. Emphysema and atelectasis was observed in the lungs, desquamation of the epithelium in the bronchi also was observed. The threshold mortality for the monomer was 2.5 volume percent for albino rats and 4.0 volume percent for rabbits. The pyrolytic decomposition of tetrafluoroethylene polymer was lethal to cats, rabbits, mice, and rats. Death was caused by acute pulmonary edema, sometimes accompanied by pneumonia. Renal dystrophy was observed in the cats. There was acute irritation of the upper respiratory tract mucosa in all test animals. It is concluded that the pathology observed upon inhalation of the products of thermal decomposition of the polymer is apparently explained by the presence in the pyrolyses gas of difluorophosgene, perfluoroisobutylene (382-21-8), and other highly toxic hydrocarbons. (Russian: English translation

# Aramid

encl. 2.

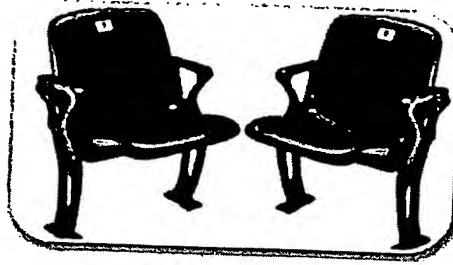
From Wikipedia, the free encyclopedia

**Aramid** fiber (1961) is a fire-resistant and strong synthetic fiber. It is used in aerospace and military applications, for "bullet-proof" body armor fabric, and as an asbestos substitute. The term is a shortened form of "**aromatic polyamide**".

A well-known type of aramid fiber (a para-aramid nylon) is commonly known by its DuPont trade name, Kevlar, or Teijin trade name Twaron. It was developed by Stephanie Kwolek. An especially fireproof meta variant is Nomex.

## Plastics

Talc is extensively used and reinforced with different type of Plastics to improve chemical and heat resistance, flame retardance, dimensional stability, stiffness, tensile strength, creep resistance, electrical spalling resistance and heat deflection temperature.



enc! ?

Platy particle shape of our talc enhances reinforcing behaviour due to two-side orientation and causes less stress concentration, which improves flow-ability. The ultra fine MICRON-G series talc products perform excellently in plastics namely PP, HDPE, NYLON, EXPS, PE and PU etc.

### **Below mentioned are some salient features of talc Micron-G:**

- Platy particle shape
- High chemical purity
- Low level of Iron content
- Controlled particle size distribution
- Extra whiteness with excellent colour coordinate values
- High aspect ratio
- High surface area
- High hydrophobicity and oleoresinous behaviour



These properties help our talc in providing excellent reinforcement with plastics resulting in their improved properties required in vital applications viz. Automotive, Home appliances, Packaging, Furniture, Engineering plastics etc. Talc (free from Blminerals) helps in minimizing the wear and tear of costly plastic processing machines.

It provides better long-term thermal stability and light stability.

Our talc grades conform European and Japanese standards and can be used in applications where food comes in contact with plastics. Surface modified talc products have also been developed for improved reinforcement, flowability and processibility to get better properties of talc filled plastics.

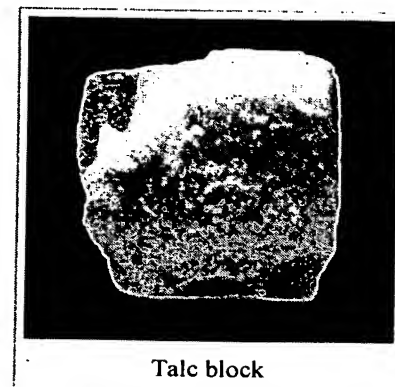
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# Talc

encl. 3.

From Wikipedia, the free encyclopedia

**Talc** is a mineral composed of hydrated magnesium silicate with the chemical formula  $\text{H}_2\text{Mg}_3(\text{SiO}_3)_4$  or  $\text{Mg}_3\text{Si}_4\text{O}_{10}(\text{OH})_2$ . It occurs as foliated to fibrous masses, its monoclinic crystals being so rare as to be almost unknown. It has a perfect basal cleavage, and the folia are non-elastic although slightly flexible. It is sectile and very soft, with a hardness of 1 (Talc is the softest mineral on Mohs' scale). It has a specific gravity of 2.5 - 2.8, a waxlike or pearly luster, and is translucent to opaque. Its colour ranges from white to gray or green and it has a distinctly greasy feel. Its streak is white.



Talc block

Talc is a metamorphic mineral resulting from the alteration of silicates of magnesium such as pyroxenes, amphiboles, olivine and other similar minerals. It is usually found in metamorphic rocks, often of a basic type due to the alteration of the minerals mentioned above.

A coarse grayish-green talc has been called soapstone or steatite and has been used for stoves, sinks, electrical switchboards, etc. Talc finds use as a cosmetic (talcum powder), as a lubricant, and as a filler in paper manufacture. Talc is used in baby powder, an astringent powder used for preventing rashes on the area covered by a nappy (see diaper rash). Most tailor's chalk is talc, as is the chalk often used for welding or metalworking.

The origin of the name derives from the Persian via Arabic *talq*.

Talc is also used as food additive or in pharmaceutical products. In the European Community the additive number is E553b.

## Safety

Several studies have established preliminary links between talc and pulmonary issues [1] ([http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=2198684&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=2198684&dopt=Abstract)), ovarian cancer [2] (<http://www.meb.uni-bonn.de/cgi-bin/mycite?ExtRef=MEDL/92293722>), and lung cancer [3] ([http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=12616290&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=12616290&dopt=Abstract)) [4] (<http://www.cdc.gov/niosh/pgms/worknotify/Talc.html>). This is a major concern considering talc's widespread commercial and household use. However, no conclusive study has yet been made to determine either the toxicity and/or carcinogenic nature of talc and the long history of safe use suggests that these concerns are unfounded.

The U.S. Food and Drug Administration (FDA) considers non-asbestiform talc, that is talc which DOES NOT contain carcinogenic asbestos fibers, to be Generally Recognized As Safe (GRAS) for use in cosmetics.

## See also

- List of minerals

## References

- mineral.galleries.com (<http://mineral.galleries.com/minerals/silicate/talc/talc.htm>)
- webmineral.com (<http://webmineral.com/data/Talc.shtml>)

encl. 4

# Fluorocarbon

From Wikipedia, the free encyclopedia

**Fluorocarbons** are carbon-fluorine compounds that often contain other elements such as hydrogen, chlorine, or bromine. Common fluorocarbons include chlorofluorocarbons and related compounds (also known as ozone depleting substances including hydrochlorofluorocarbon which is a CFC substitute). Fluorocarbons are polymers and are organic compounds containing fluorine directly bonded to carbon. The ability of the carbon atom to form a large variety of structural chains gives rise to many fluorocarbons and fluorocarbon derivatives. For example, a famous fluorocarbon is DuPont's Teflon. Similarly, organofluorine stain-repellants are widely used (such as perfluorobutanesulfonate, and perfluorooctanesulfonate, related to perfluorooctanoic acid). Fluorocarbons are also used in fishing line and myriad precision plastics applications. The material is tough, non-contaminating and is an electrical insulator. Fluorocarbon compounds are also used in highly precise lubrication applications.

There are very few naturally-occurring fluorine-containing organic compounds, in comparison with natural products that contain other halogens (chlorine, bromine). Conversely, the C-F bond is generally metabolically stable.

Retrieved from "<http://en.wikipedia.org/wiki/Fluorocarbon>"